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WEEKLY OVERSIGHT REPORT

CH2MHILL**Weekly Summary Report
USEPA Oversight, Sauget Area 2, Sauget, IL
WA No. 224-RXBF-05XX / Contract No. 68-W6-0025****Week Ending Friday, September 24, 2004**

This report summarizes the Interim Remedial Action (IRA) work conducted by Solutia and its contractors from September 17 through September 24, 2004 at Site R, Sauget Area 2. The current IRA fieldwork consists of site preparation, barrier wall trenching, and backfilling, with excavation performed on day and night shifts.

Contractors Onsite

Inquip Associates Inc. (barrier wall construction contractor)
PSI (geotechnical testing subcontractor)
Layne Western (contractor for well maintenance)
Aerotek (air monitoring subcontractor)
URS (primary consultant for Solutia)

Work Performed This Week

Work at the site continued with excavation and backfill activities on the open trench segment located in the northern portion of Site R. Backfill was placed into the open trench on four days during the week.

Excavation activities continued with the Liebherr 853 hydraulic clamshell during the week. By the end of the week, the open trench extended to approximately 1,343 feet in length. Excavation activities were estimated to be approximately 100 percent complete by the end of the week, with backfill activities at approximately 77 percent complete.

Groundwater Migration Control System (GMCS)

The river elevation remained steady during the week, rising slightly from 384.60 feet above mean sea level (amsl) on September 17 to 387.48 feet amsl on September 24. The combined flow rate of the extraction well system continued to hold steady at approximately 2,000 gallons per minute (gpm) until the afternoon of Wednesday, September 22, when the pump in well EW1 failed. The pump was replaced on Friday, September 24, by Layne Western. During the change-out of EW1, wells EW2 and EW3 were turned off.

Eight barrier wall piezometers, with four inside and four outside the barrier wall alignment, monitored the groundwater elevations adjacent to the barrier wall alignment during the week. Table 1 shows the river and piezometer water elevations measured on September 24, 2004 (1:00 PM). The barrier wall has been constructed adjacent to piezometer pairs P2, P3, and P4. In the vicinity of piezometer pair P1 (station 31+00), the trench has been excavated to total depth, with a portion of the trench backfilled and overlain with slurry.

At the beginning of the reporting period (September 17), two of the piezometer pairs (P1, and P4) showed an inward gradient. The gradient reversed to an outward direction at P1

following the pump failure in nearby EW1 on September 22. The gradient in the P4 wells showed an inward gradient throughout the reporting period.

Water elevations in piezometer pair P2 showed an outward gradient across the barrier wall throughout the reporting period. Piezometer pair P3 initially showed an outward gradient, but reversed to an inward gradient on September 23.

With one exception, the Mississippi River level during the reporting period remained higher than the piezometers located on the inside of the barrier wall. Following the pump failure at EW1 on September 22, the water elevation in Piezometer 2E rose above the Mississippi River level. The water elevation in this piezometer remained higher than the river elevation for the remainder of the reporting period.

Consequently by September 24, the GMCS system, except at Piezometer 2E, met the gradient control metrics (i.e., river level greater than or equal to water levels in the inside piezometers) for Groundwater Alternative C (Hydraulic Barrier) in the Focused Feasibility Study (FFS) for Sauget Area 2 Sites O, Q, R, and S (URS, 2003).

The September 2002 Record of Decision (ROD) metrics state there should be a zero gradient across the barrier wall, as measured between the piezometer pairs on either side of the wall. The ROD metrics had not been met by the end of the reporting period on September 24.

TABLE 1
River and Piezometer Water Elevations – September 24, 2004 (13:00)

	Elevation (ft above mean sea level)
River Level	387.48
Piezometer 1S – inside wall (northern-most pair)	387.36
Piezometer 1N – outside wall (northern-most pair)	386.15
Piezometer 2E – inside wall (north-central pair)	387.90
Piezometer 2W – outside wall (north-central pair)	385.21
Piezometer 3E – inside wall (south-central pair)	387.03
Piezometer 3W – outside wall (south-central pair)	385.14
Piezometer 4E – inside wall (southern-most pair)	386.16
Piezometer 4W – outside wall (southern-most pair)	385.82

Stormwater

No stormwater activity occurred during the week

Barrier Wall Construction

Inquip continued excavation of the open trench along the barrier wall alignment, removing the remaining panels and wedges. As of September 24, the trench excavation that remains open extends from station 25+10 to station 37+93, approximately 1,283 feet in length.

The Liebherr 843 hydraulic clamshell completed excavation activities at the end of the last reporting period and was decontaminated and disassembled this week. The Liebherr 853 hydraulic clamshell excavated on four days during the week, and performed trench clean out on four days. The Liebherr 855 mechanical clamshell is currently onsite but outside of the exclusion zone awaiting demobilization. The Koehring 1266 trackhoe also completed excavation activities and is awaiting demobilization.

During the week, the depth of the open trench was measured daily. Table 2 summarizes the trench profile that was measured on the morning of September 24. On Graph 1, the current trench profile is depicted in comparison with the trench profile measured on September 17. Graph 2 shows the overall progress of the barrier wall construction.

Slurry

No fresh slurry was mixed this week. Slurry pumped into the trench came from the holding ponds where it had been mixed and stored the prior weeks. Slurry was pumped into the trench on one day only. Slurry levels in the trench were maintained by continually adding backfill to the open trench.

Slurry samples were collected from the top and the bottom of the trench daily and were tested for viscosity, density (unit weight), filtrate loss, pH and sand content. Analysis of trench slurry samples from the trench segment either met the specifications or satisfied the quality targets.

Spoils Handling

During the week, spoils were transferred from locations adjacent to the open trench or from the temporary stockpile on top of the landfill to the backfill mix pad near station 25+10.

Backfill and Trench Cleaning

Backfill operations were suspended on Friday morning due to a problem that was discovered by the onsite URS Quality Assurance/Quality Control (QA/QC) representative. A review of recent trench profiles showed that the backfill material had not assumed its natural angle of repose in the trench. On the afternoon of Thursday, September 23, URS and Inquip personnel performed a profile of the backfill surface inside the trench, concentrating on the area between stations 32+65 and 32+75. The profile showed that the top of backfill was approximately 80 feet below ground surface (bgs) at station 32+65 and approximately 120 feet bgs at station 32+75, indicating an apparent blockage or obstruction. These stations are located in the area of a concrete utility vault that crosses the open trench. It appears that the obstruction is a wedge beneath the vault that was not completely excavated.

During the week, Inquip mixed and placed approximately 1,290 cubic yards of backfill material into the open trench. Backfill operations took place on four days during the week. The backfill spoils were mixed with approximately two percent of dry bentonite and slurry as necessary to meet quality specifications.

The backfill was tested by PSI for slump, unit weight and moisture content. The unit weight of backfill placed during the week ranged from 128 to 133 pounds per cubic foot (pcf). Slump test results averaged 4.0 inches, and the moisture content results ranged from 16 to 19.9 percent. All test results met the minimum requirements. Tests on the backfill mixture to be conducted offsite by Mueser-Rutledge and PSI's labs included permeability and gradation. No results were available at the end of the reporting period.

Prior to backfill placement, the trench bottom was cleaned to bedrock over at least a 40-foot linear stretch. Depth-to-bottom measurements were made every 10 linear feet of trench to ensure that the bottom of the trench was at a consistent depth and on top of bedrock. These depth measurements were performed with the clamshell rig's instrumentation and confirmed in two locations manually with the downrigger (plumbob on wire). The Liebherr 853 hydraulic clamshell rig was used for this purpose on days when backfill was placed. Two samples were collected daily by PSI with a clam sampler from the top of the backfill prior to backfill placement. These samples were visually checked to ensure that the backfill surface in the trench was clean and free of any sand.

Other Activities

Aerotek performed the routine air monitoring conducted at Site R on four days of the week.

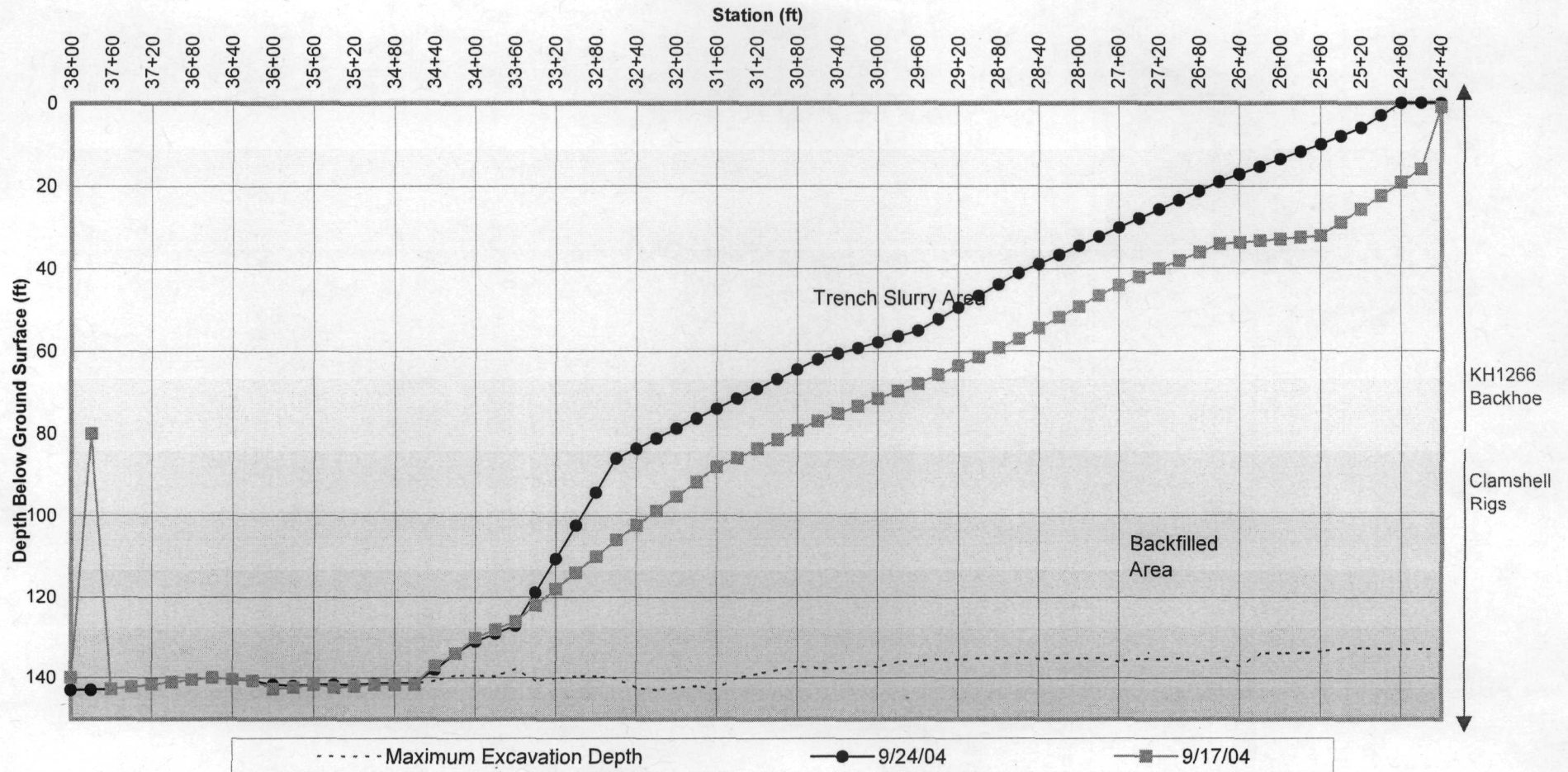
Layne Western was onsite on one day during the week replacing a faulty pump at well EW1.

TABLE 2

Trench Profile (Downrigger Measurements) for the Barrier Wall Trench – September 24, 2004 7:00(AM)

Station ID	Depth to bottom (ft below ground surface)
25+10	3
25+60	10
26+60	14
27+60	30
28+60	41
29+60	55
30+60	62
31+60	74
32+60	86
33+60	127
33+80	129
34+00	131
34+20	134
34+40	138
34+60	142
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35+40	145
35+60	145
36+60	140
37+60	142
37+93	141

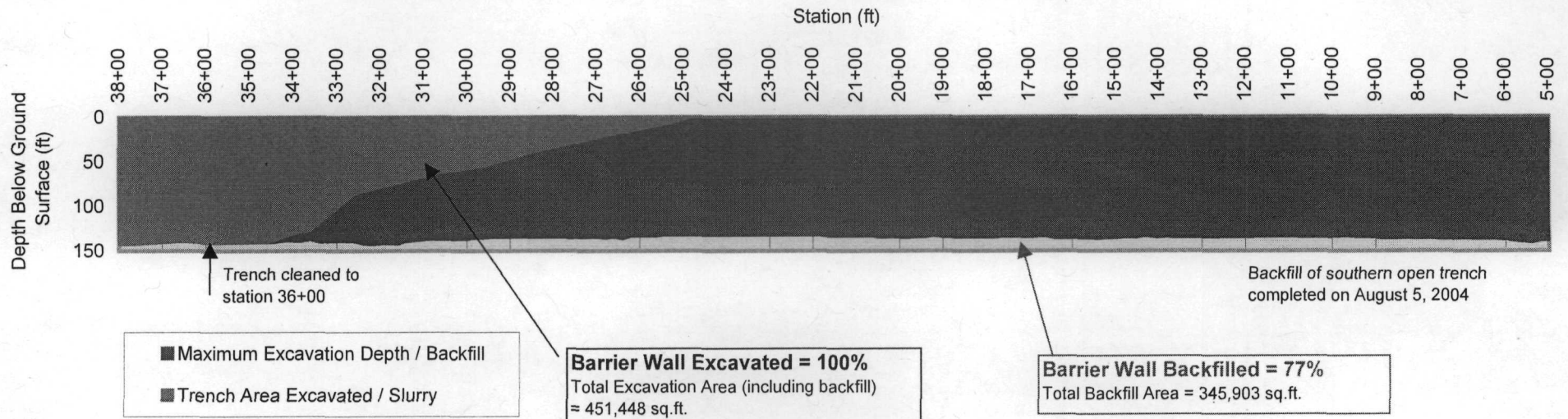
Graph 1 - Weekly Barrier Wall Construction Progress - Open Trench Segment
September 17 through September 24, 2004



Note: Data plotted for the week through measurements on 9/17/04 and 9/24/04.

Some data points are interpolated between the available data points where trench depths were read.

Graph 2 - Barrier Wall Construction Progress by September 24, 2004 (PM)



Note: Data plotted for the week through AM measurements on 9/24/04.

Photos from September 17, 2004 through September 24, 2004:



Demobilizing the Liebherr 843 hydraulic clamshell. (September 23, 2004)



855 Mechanical Clamshell being removed from exclusion zone (September 24, 2004)